Financial Markets and Institutions

Abridged 10th Edition

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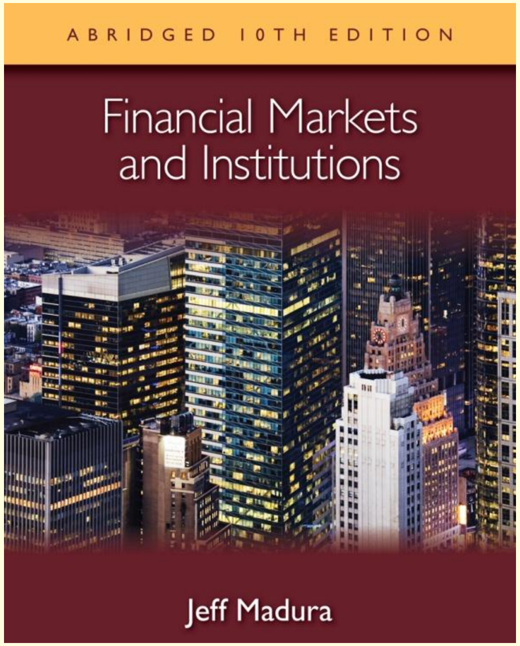


5 Monetary Policy

Chapter Objectives

- describe the mechanics of monetary policy
- explain the tradeoffs involved in monetary policy
- describe how financial market participants respond to the Fed’s policies
- explain how monetary policy is affected by the global environment

Mechanics of Monetary Policy

Monitoring Indicators of Economic Growth:

The Fed monitors indicators of economic growth:

- **GDP** - measures the total value of goods and services produced during a specific period
- **National Income** - the total income earned by firms and individual employees during a specific period
- **Unemployment rate** - maintain a low of unemployment rate in the U.S.
- **Other indexes** - Industrial production index, a retail sales index, and a home sales index

Monitoring Indicators of Economic Growth

Indexes of Economic Indicators include:

- **Leading economic indicators** which predict future economic activity.
- **Coincident economic indicators** which tend to reach their peaks and troughs at the same time as business cycles.
- **Lagging economic indicators** which tend to rise or fall a few months after business-cycle expansions and contractions.

Exhibit 5.1 The Conference Board's Indexes of Leading, Coincident, and Lagging Indicators

Leading Index
1. Average weekly hours, manufacturing
2. Average weekly initial claims for unemployment insurance
3. Manufacturers' new orders, consumer goods and materials
4. Vendor performance, slower deliveries diffusion index
5. Manufacturers' new orders, nondefense capital goods
6. Building permits, new private housing units
7. Stock prices, 500 common stocks
8. Money supply, M2
9. Interest rate spread, 10-year Treasury bonds less federal funds
10. Index of consumer expectations
Coincident Index
1. Employees on nonagricultural payrolls
2. Personal income less transfer payments
3. Industrial production
4. Manufacturing and trade sales
Lagging Index
1. Average duration of unemployment
2. Inventories to sales ratio, manufacturing and trade
3. Labor cost per unit of output, manufacturing
4. Average prime rate
5. Commercial and industrial loans
6. Consumer installment credit to personal income ratio
7. Consumer price index for services

Monitoring Indicators of Inflation

a. **Producer and consumer price indexes**: Producer price index represents prices at the wholesale level, and the consumer price index represents prices paid by consumers (retail level).

b. **Other inflation indicators**

   i. Wage rates are periodically reported in various regions.

   ii. Oil prices can signal future inflation because they affect the costs of some forms of production as well as transportation costs and the prices paid by consumers for gasoline.

   iii. The price of gold is closely monitored because gold prices tend to move in tandem with inflation.

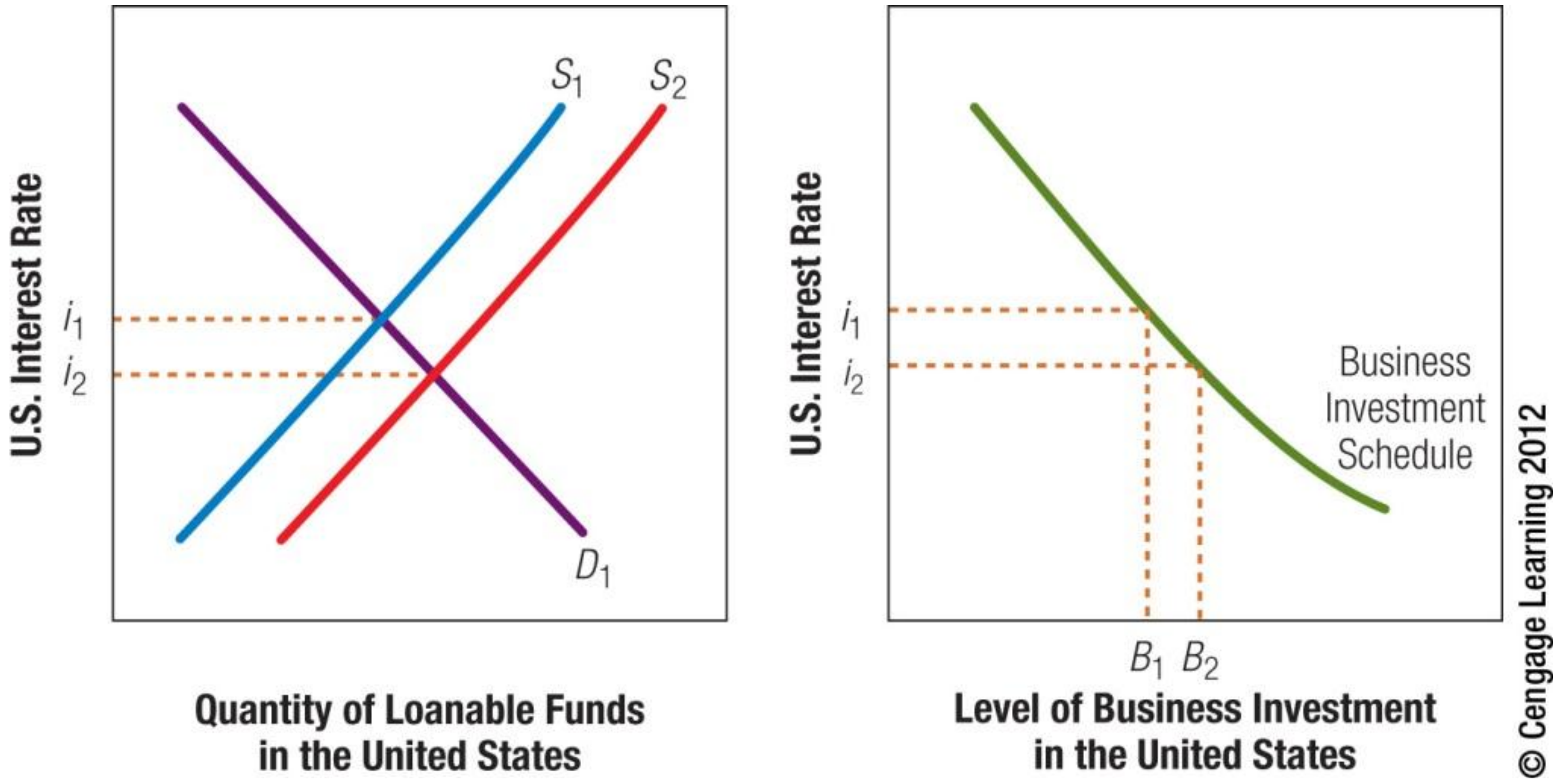
   iv. In some cases, indicators of economic growth are also used to indicate inflation.

Implementing the Proper Monetary Policy

1. Once the Federal Open Market Committee assesses economic conditions, it can identify its main concerns about the economy and determine the proper monetary policy that would alleviate its concerns.

2. The supply curve of loanable funds indicates the quantity of funds that would be supplied (at that time) at various possible interest rates.

Exhibit 5.2 Effects of an Increased Money Supply



Mechanics of Monetary Policy

1. **Correcting a Weak Economy:**
   - The Fed can increase the level of spending to stimulate the economy
   - The Fed can use open market operations to increase the money supply
2. **Correcting High Inflation**
   - Fed can institute a tight-money policy using open market operations to reduce money supply growth.
3. **Setting a Target for the Federal Funds Rate**
   - The federal funds rate is directly affected by changes to the supply of money. The Fed's monetary policy is implemented to achieve a specific targeted federal funds rate, such as reducing that rate from 3 percent to 2.75 percent or to a value within the range from 2.75 to 3 percent.

Exhibit 5.3 Effects of a Reduced Money Supply

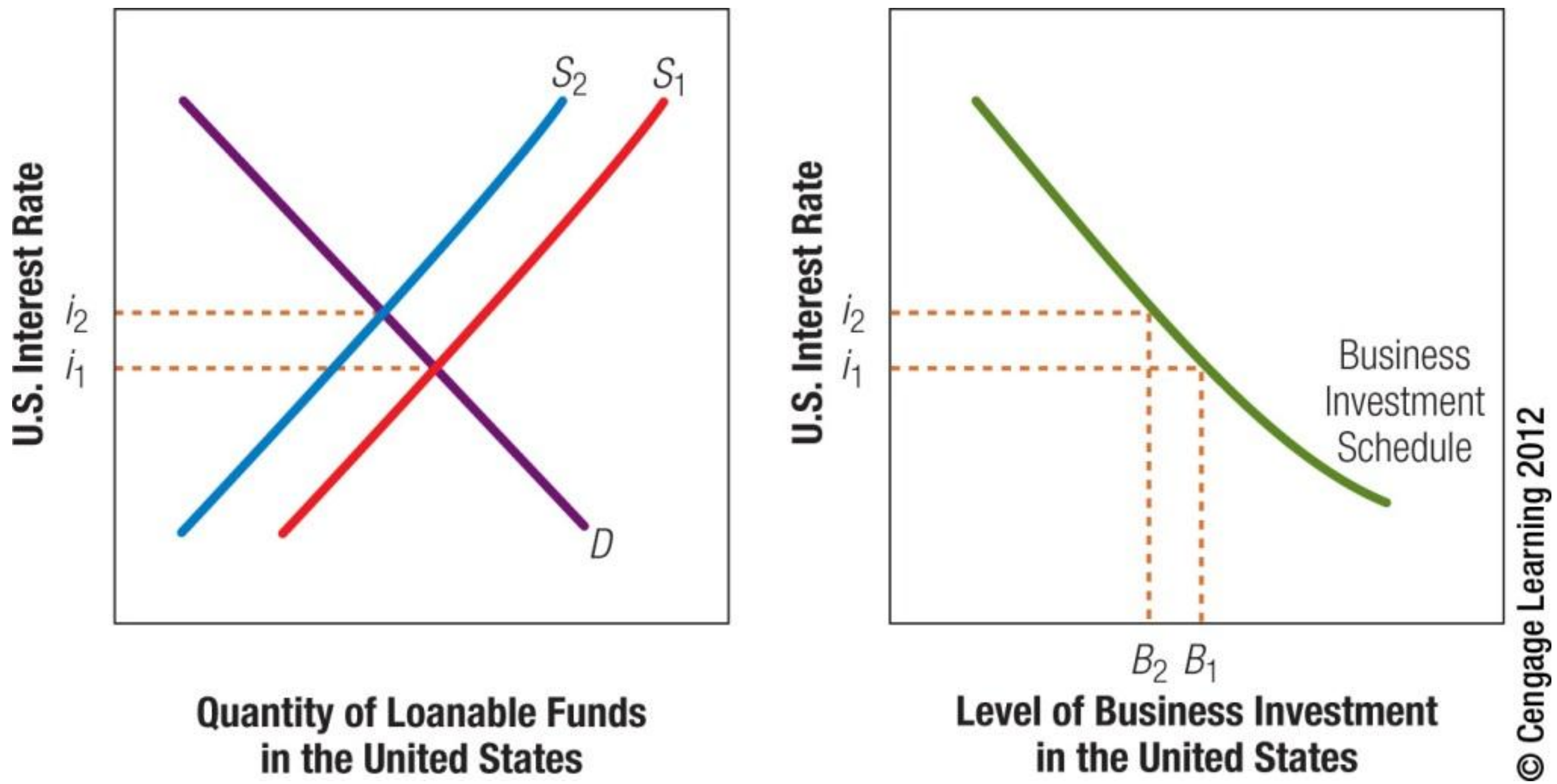
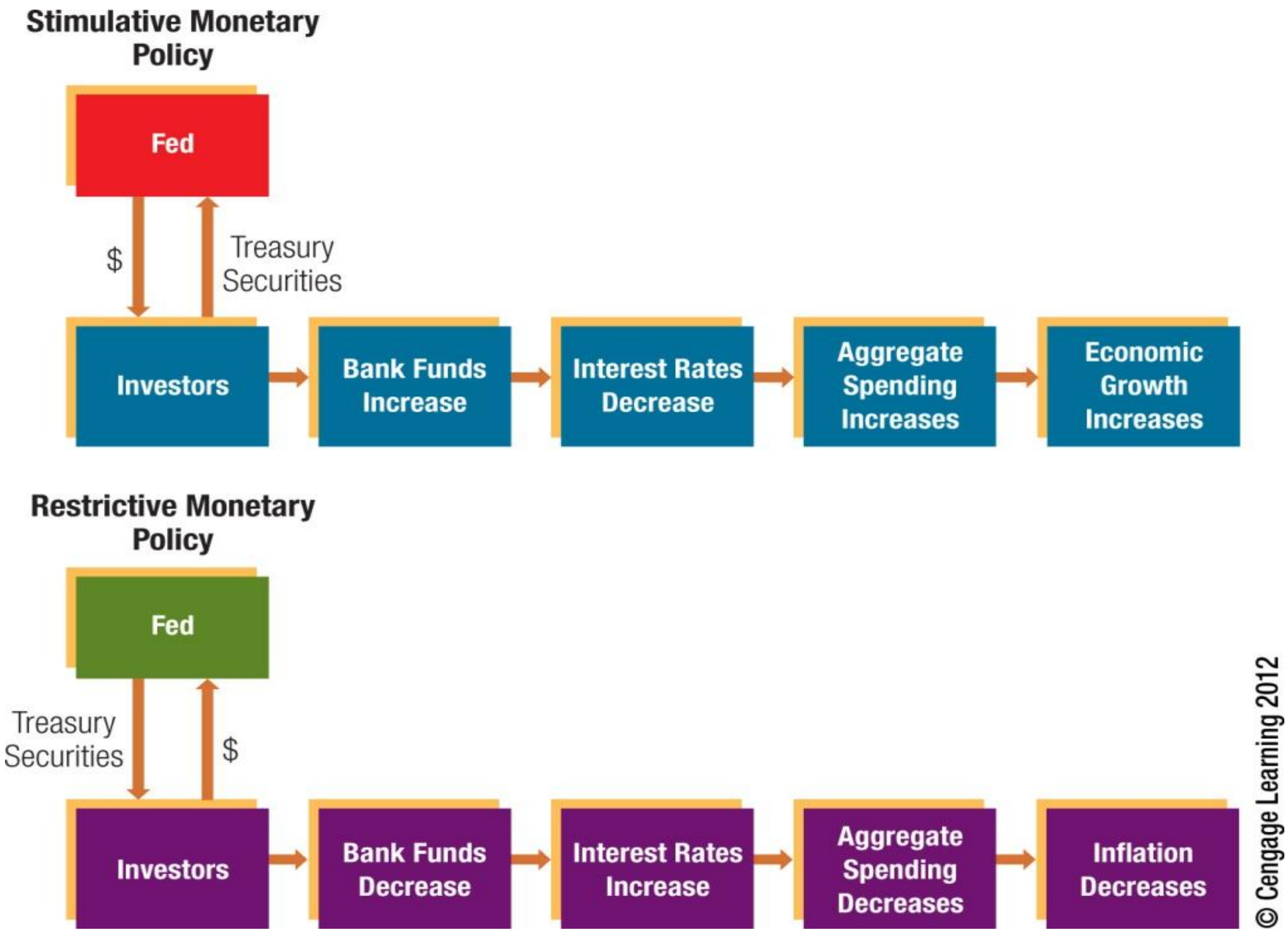


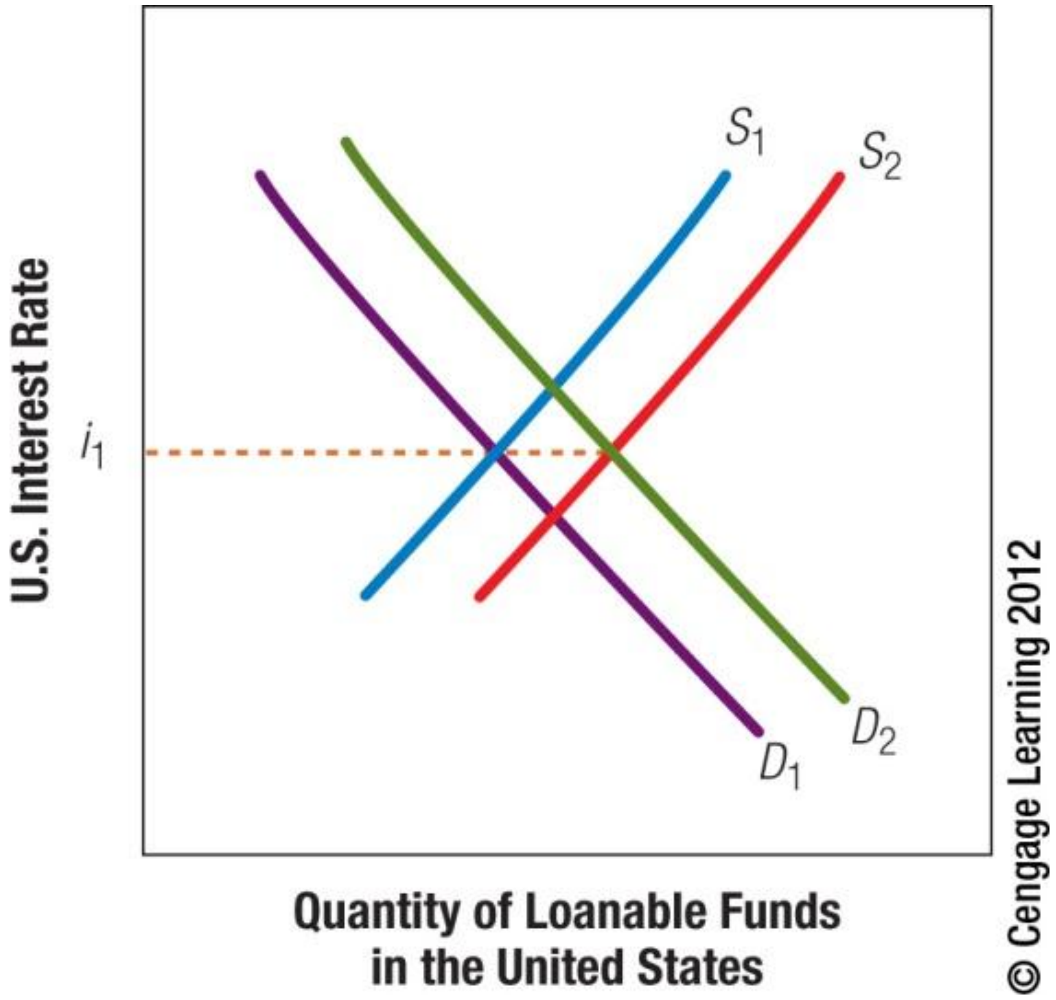
Exhibit 5.4 How Monetary Policy Can Affect Economic Conditions



Limitations of Monetary Policy

1. **Impact of a Credit Crunch** - even if the Fed increases the level of bank funds, banks may be unwilling to extend credit.
2. **Lagged Effects of Monetary Policy:**
   a. Recognition lag - lag between the time a problem arises and the time it is recognized
   b. Implementation lag - lag from the time a serious problem is recognized until the time the Fed implements a policy to resolve that problem
   c. Impact lag – lag until the policy has its full impact on the economy
3. **Impact of a Stimulative Policy on Expected Inflation:** effect of increase in money supply growth may be disrupted due to an increase in inflationary expectations.

Exhibit 5.5 Effects of an Increased Money Supply According to Rational Expectations Theory



Tradeoff in Monetary Policy

Ideally, the Fed would like to achieve both a very low level of unemployment and a very low level of inflation in the United States.

- Inverse relationship between inflation and unemployment.
  - **Strong economic conditions:** high inflation, low unemployment
  - **Weak economic conditions:** low inflation, high unemployment
- Impact of other forces on the tradeoff
  - Historical data on annual inflation and unemployment rates show that when one of these problems worsens, the other does not automatically improve.

Exhibit 5.6 Trade-off between Reducing Inflation and Unemployment

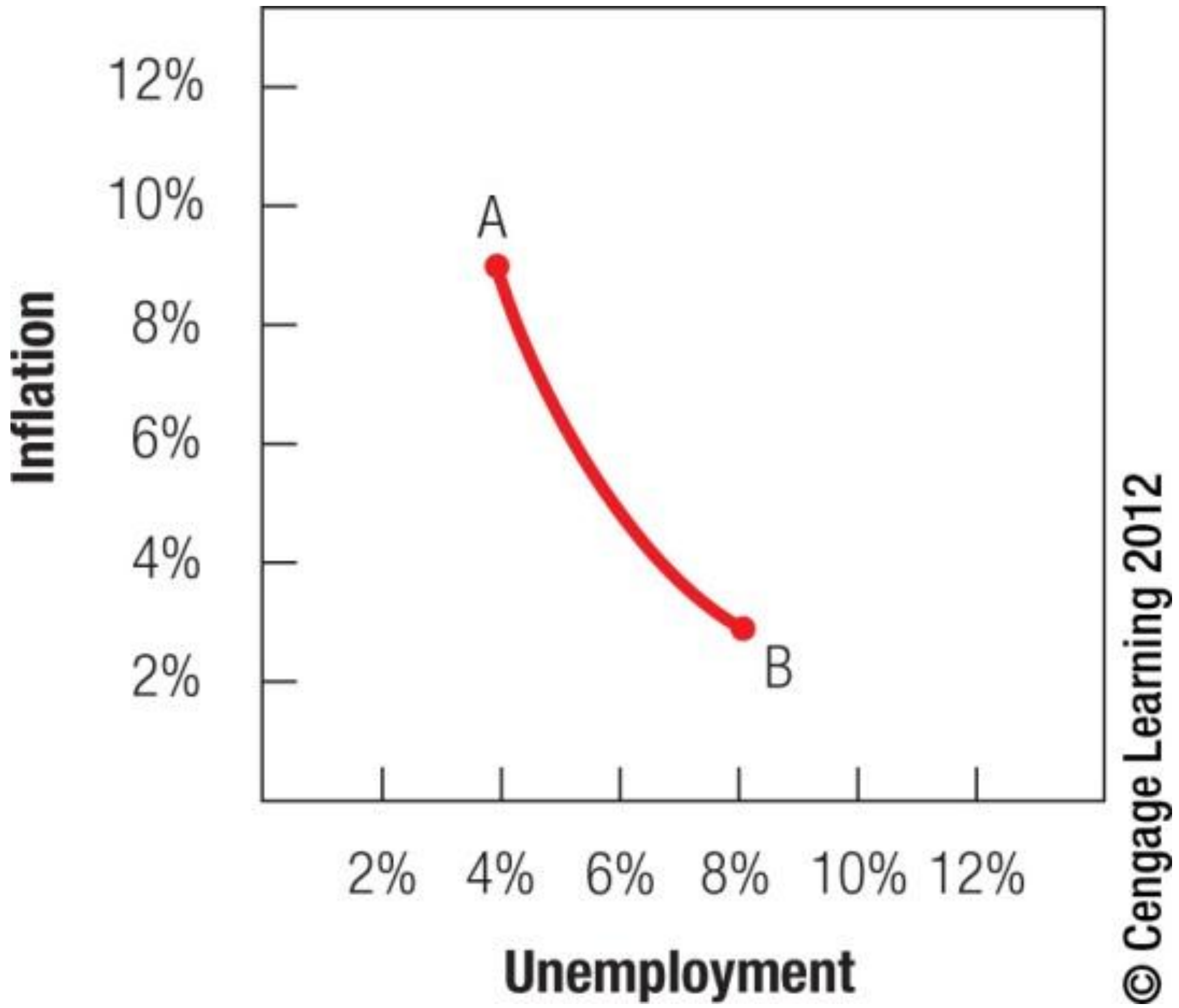
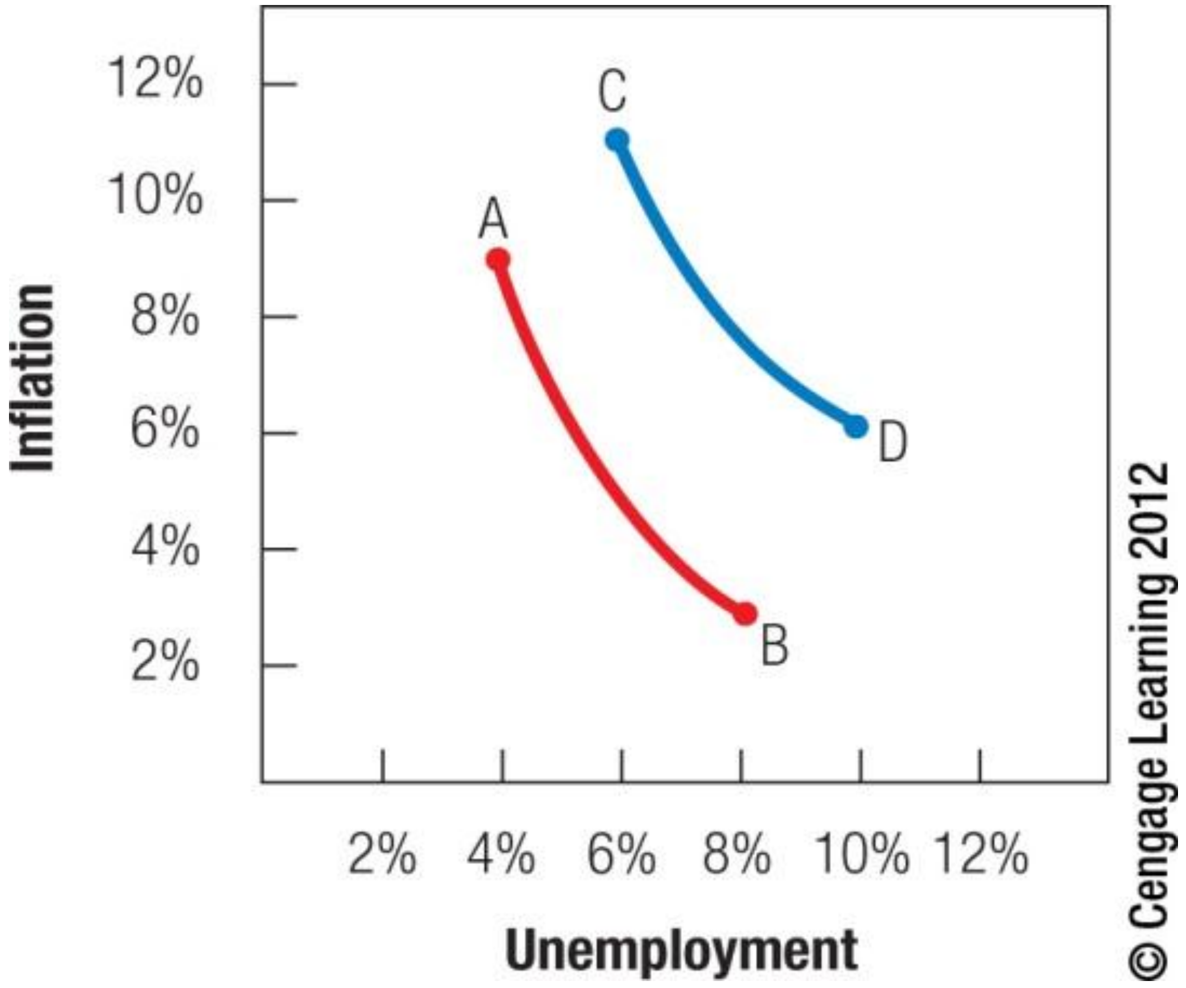


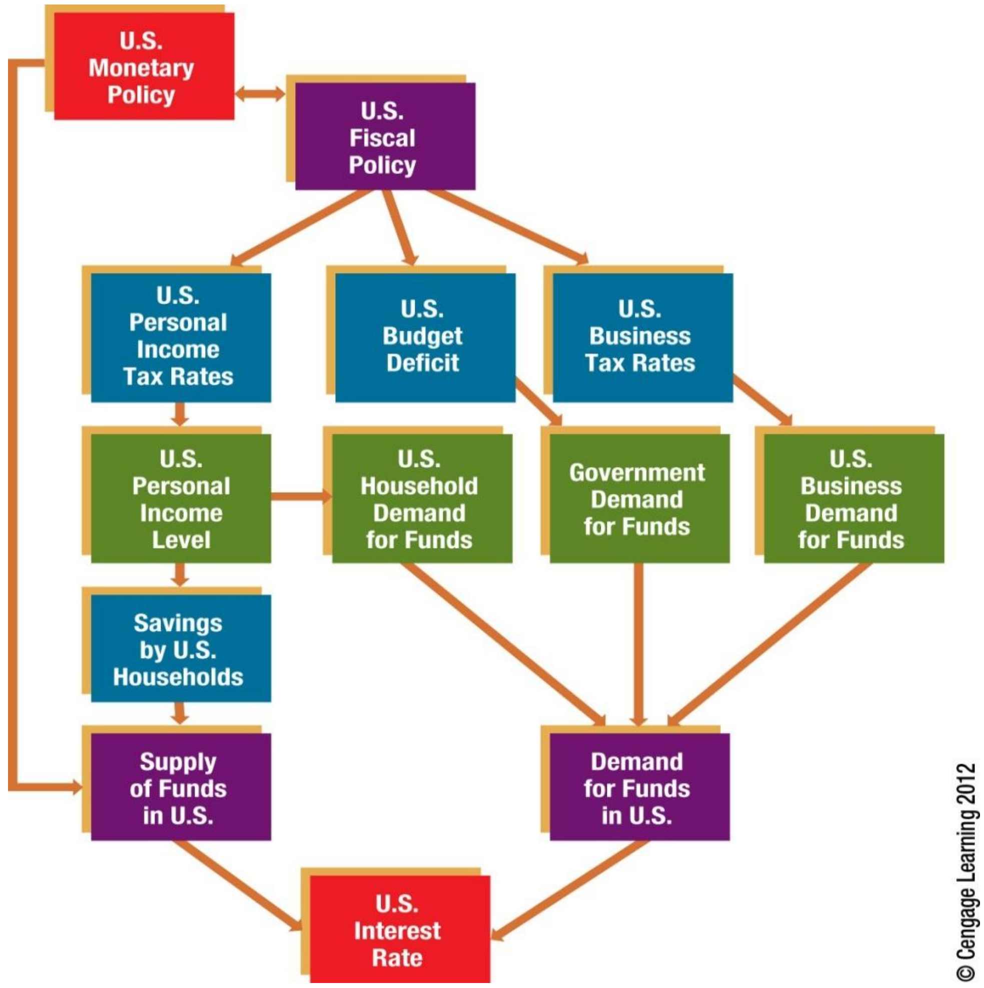
Exhibit 5.7 Adjustment in the Trade-off between Unemployment and Inflation over Time



Tradeoff in Monetary Policy

- **Shifts in Monetary Policy over Time**
  - Focus on improving a weak economy in 2001-2003
  - Focus on reducing inflation in 2004-2007
  - Focus on improving weak economy in 2008-2009
- **How Monetary Policy Responds to Fiscal Policy**
  - The Fed's monetary policy is commonly influenced by the administration's fiscal policies.
  - If fiscal pressures create large budget deficits, this may place upward pressure on interest rates and the Fed may feel pressured to use a stimulative monetary policy to reduce interest rates.
  - Fiscal policy shifts demand for loanable funds, but monetary policy has a larger impact on the supply of loanable funds.

Exhibit 5.8 Framework for Explaining How Monetary Policy and Fiscal Policy Affect Interest Rates over Time



Tradeoff in Monetary Policy

Proposals to Focus on Inflation

1. **Advantages of inflation targeting**:
   - The Fed would no longer face a trade-off between controlling inflation and controlling unemployment.
   - The Fed would not have to consider responding to any fiscal policy actions.
   - The Fed's role would be more transparent and would lead to less uncertainty in financial markets.

2. **Disadvantages of inflation targeting**
   a. The Fed could lose credibility if the U.S. inflation rate deviated substantially from the Fed's target inflation rate.
   b. Could result in a much higher unemployment level.

Monitoring the Impact of Monetary Policy

1. Impact on Financial Markets

- **Monetary policy affects the valuation of securities:**
  - Bond values are inversely related to interest rates.
  - Stock values are affected by interest rate movements.
- **Fed's communication to the markets**
  - After the FOMC meeting, the conclusion is announced through an **FOMC statement.**
- **Impact of the Fed's response to oil shocks**
  - Any event that might disrupt the world's production of oil triggers concerns about inflation.
  - The Fed does not have control over oil prices, but it can dampen any inflationary pressure if it slows economic growth.

Exhibit 5.9 How Monetary Policy Affects Financial Conditions

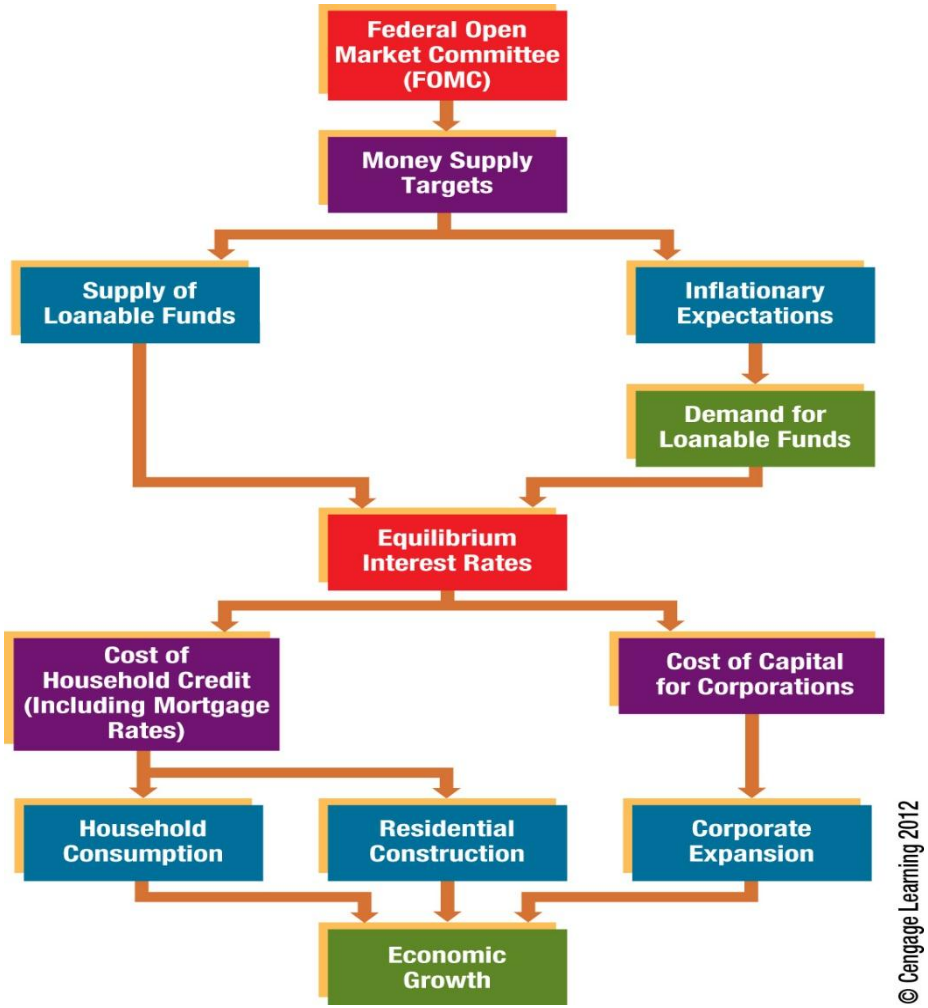


Exhibit 5.10 Impact of Monetary Policy across Financial Markets

TYPE OF FINANCIAL MARKET	RELEVANT FACTORS INFLUENCED BY MONETARY POLICY	KEY INSTITUTIONAL PARTICIPANTS
Money market	• Secondary market values of existing money market securities • Yields on newly issued money market securities	Commercial banks, savings institutions, credit unions, money market funds, insurance companies, finance companies, pension funds
Bond market	• Secondary market values of existing bonds • Yields offered on newly issued bonds	Commercial banks, savings institutions, bond mutual funds, insurance companies, finance companies, pension funds
Mortgage market	• Demand for housing and therefore the demand for mortgages • Secondary market values of existing mortgages • Interest rates on new mortgages • Risk premium on mortgages	Commercial banks, savings institutions, credit unions, insurance companies, pension funds
Stock market	• Required return on stocks and therefore the market values of stocks • Projections for corporate earnings and therefore stock values	Stock mutual funds, insurance companies, pension funds
Foreign exchange	• Demand for currencies and therefore the values of currencies, which in turn affect currency option prices	Institutions that are exposed to exchange rate risk

Impact of Monetary Policy (Cont.)

2. Impact on Financial Institutions

- When interest rates rise, the cost of funds for financial institutions rises faster than the return they receive.
- Financial institutions such as commercial banks, bond mutual funds, insurance companies, and pension funds maintain large portfolios of bonds, so their portfolios are adversely affected when the Fed raises interest rates.
- Stock mutual funds, insurance companies, and pension funds maintain large portfolios of stocks, and their stock portfolios are also indirectly affected by changes in interest rates.

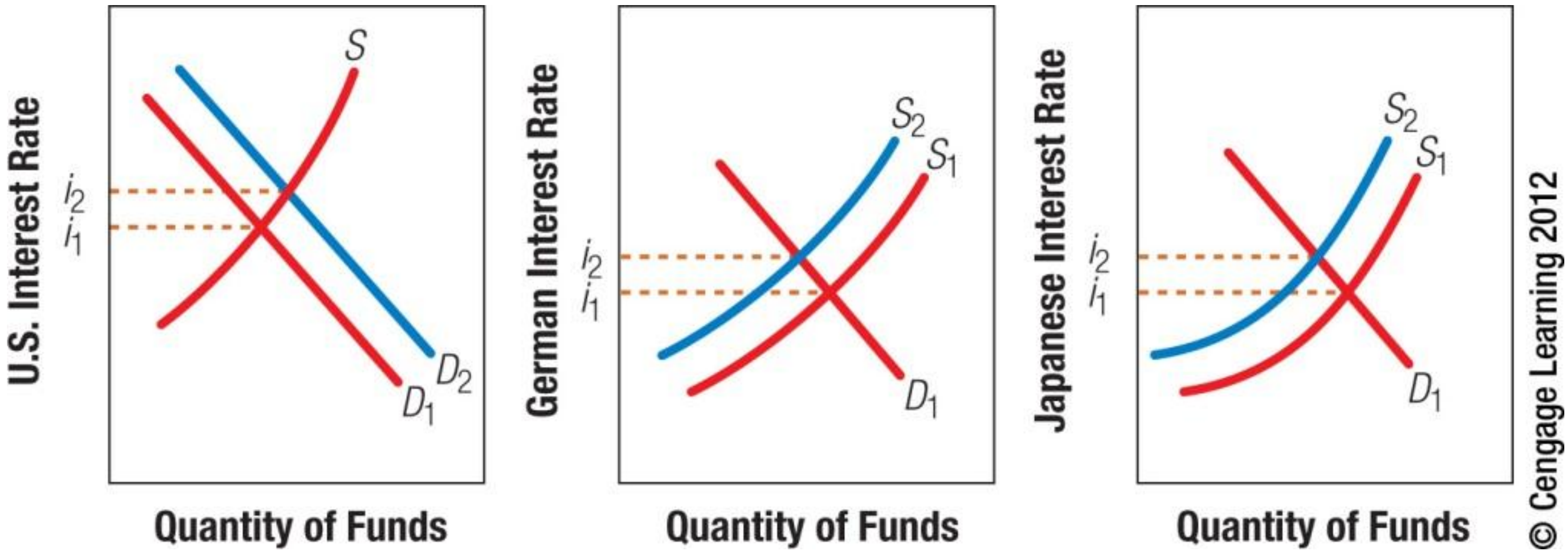
Global Monetary Policy

1. **Impact of the dollar**
   a. If the U.S. economic conditions are weak, a weak dollar can stimulate the economy by stimulating U.S. exports and discouraging U.S. imports.
   b. If U.S. economic conditions are weak, a strong dollar will not provide the stimulus needed to improve conditions. The Fed may need to implement a stimulative monetary policy.
2. **Impact of global economic conditions**
   a. Because economic conditions are integrated across countries, the Fed considers prevailing global economic conditions when conducting monetary policy.
   b. The Fed's decision to lower U.S. interest rates during the 2008 credit crisis and stimulate the U.S. economy was partially driven by weak global economic conditions.

3. Transmission of Interest Rates

- Global interest rates will vary between countries.
- Countries with higher rates will attract investors from countries with lower rates.
- If investors leave due to U.S. falling rates, the Fed may believe it should act to prevent rates from falling lower.
- Given the international integration in money and capital markets, a government's budget deficit can affect interest rates of various countries, referred to as **global crowding out**.

Exhibit 5.11 Illustration of Global Crowding Out



Impact of the Crisis in Greece on European Monetary Policy

1. In the spring of 2010, Greece experienced a weak economy and a large budget deficit.
2. Creditors were less willing to lend the Greece government funds because they feared that the government may be unable to repay the loans.
3. The European Central Bank (ECB) was forced to use a more stimulative monetary policy than desired in order to ease concerns about the Greek crisis, even though this caused other concerns about potential inflation in the eurozone.

SUMMARY

- By using monetary policy, the Fed can affect the interaction between the demand for money and the supply of money, which affects interest rates, aggregate spending, and economic growth. As the Fed increases the money supply, interest rates should decline and result in more aggregate spending (because of cheaper financing rates) and higher economic growth. As the Fed decreases the money supply, interest rates should increase and result in less aggregate spending (because of higher financing rates), lower economic growth, and lower inflation.

SUMMARY

- A stimulative monetary policy can increase economic growth, but it could ignite demand-pull inflation. A restrictive monetary policy is likely to reduce inflation but may also reduce economic growth. Thus, the Fed faces a trade-off when implementing monetary policy. Given a possible trade-off, the Fed tends to pinpoint its biggest concern (unemployment versus inflation) and assesses whether the potential benefits of any proposed monetary policy outweigh the potential adverse effects.

SUMMARY

- Since monetary policy can have a strong influence on interest rates and economic growth, it affects the valuation of most securities traded in financial markets. Financial market participants attempt to forecast the Fed’s future monetary policies and the effects of these policies on economic conditions. When the Fed implements monetary policy, financial market participants attempt to assess how their security holdings will be affected and adjust their security portfolios accordingly.

SUMMARY

- The Fed's monetary policy must take into account the global economic environment. A weak dollar may increase U.S. exports and thereby stimulate the U.S. economy. If economies of other countries are strong, this can also increase U.S. exports and boost the U.S. economy. Thus, the Fed may not have to implement a stimulative monetary policy if international conditions can provide some stimulus to the U.S. economy. Conversely, the Fed may consider a more aggressive monetary policy to fix a weak U.S. economy if international conditions are weak, since in that case the Fed cannot rely on other economies to boost the U.S. economy.